

DEXMEDETOMIDINE VERSUS KETOFOL EFFECT ON THE INCIDENCE OF EMERGENCE AGITATION ASSOCIATED WITH SEVOFLURANE-BASED ANESTHESIA IN CHILDREN UNDERGIONG ADENOTONSILLECTOMY

ABSTRACT

OBJECTIVE; The rapid emergence and recovery from sevoflurane anesthesia is associated with high incidence of emergence agitation in children ranging up to 80%. Both ketofol and dexmedetomidine have been shown to successfully reduce the incidence and severity of emergence agitation, if administered at the end of sevoflurane anesthesia. However, it was not determined which agent has better efficacy. The purpose of this study was to compare the effectiveness of ketofol and dexmedetomidine, given 10 mins before the end of surgery, in preventing emergence.

METHODS: Ninety pediatric patients, aged 6-12 years, ASA I or II and undergoing adenotonsillectomy under sevoflurane based anesthesia were recruited into the study. They were randomly allocated into two groups; group K, received ketofol (ketamine 0.25 mg/kg, propofol 1 mg/kg), group D received dexmedetomidine 0.3 µg/kg. The study drugs were given 10 mins before the end of surgery. In PACU, incidence of emergence agitation was evaluated with Aono's four point scale and severity of emergence agitation was assessed using pediatric anesthesia emergence delirium scale upon awakening (T_0), after 10 mins (T_{10}), 20 mins (T_{20}), after 30 mins (T_{30}). Extubation time, duration of sevoflurane exposure, duration of surgery and duration of PACU stay are recorded.

RESULTS: The incidence of emergence agitation in group D is significantly lower than group K. The incidence of emergence agitation decreased significantly over time in both groups. Time to extubation and to get modified Aldrete score >9 was significantly higher with group D than group K. But modified objective scale is higher with group K than group D.

CONCLUSION: We found that dexmedetomidine (0.3 µg/kg) was effective than ketofol in reducing emergence agitation with better analgesic effect but delaying emergence.

Keywords; Adenotonsillectomy, Emergence agitation, Sevoflurane, Dexmedetomidine, Ketofol.